SYSTEMS AND METHODS FOR SENSING AN ACOUSTIC SIGNAL USING MICROELECTROMECHANICAL SYSTEMS TECHNOLOGY

ABSTRACT OF THE DISCLOSURE

An acoustic system has an acoustic sensor and a processing circuit. The acoustic sensor includes a base, a microphone having a microphone diaphragm supported by the base, and a hot-wire anemometer having a set of hot-wire extending members supported by the base. The set of hot-wire extending members defines a plane which is substantially parallel to the microphone diaphragm. The processing circuit receives a sound and wind pressure signal from the microphone and a wind velocity signal from the hot-wire anemometer, and provides an output signal based on the sound and wind pressure signal from the microphone and the wind velocity signal from the hot-wire anemometer (e.g., accurate sound with wind noise removed). The configuration of the hot-wire extending members defining a plane which is substantially parallel to the microphone diaphragm can be easily implemented in a MEMS device making the configuration suitable for miniaturized applications.